

Amdt. dated Feb 15, 2006
Reply to Office action of December 15, 2005

Serial No. 09/770,894
Docket No. BLD920000045US1
Firm No. 0036.0080

REMARKS/ARGUMENTS

The Examiner found that claims 7-9, 17-19, and 27-29 would be allowed if rewritten in independent form including the requirements of the base claims. Applicants submit that these claims are in condition for allowance in their current form because the base claims from which they depend are patentable over the cited art for the reasons discussed below.

1. Claims 1-3, 6, 10-13, 16, 20-23, 26, and 30 are Patentable Over the Cited Art

The Examiner rejected claims 1-3, 6, 10-13, 16, 20-23, 26, and 30 as obvious (35 U.S.C. §103) over Suzuki (U.S. Patent No. 6,549,947) in view of Herzog (U.S. Patent No. 4,651,278). Applicants traverse.

Claims 1, 11, and 21 concern interfacing with a print driver and require: receiving data transmitted from the printer driver; receiving an acknowledgment request from the printer driver, wherein the printer driver does not send further data to print until receiving an acknowledgment reply indicating that the transmitted data passed an initial check; transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data; resynchronizing data processing operations in response to detecting an error in the received data; and rasterizing and outputting the data.

The Examiner cited col. 6, lines 32-65 and cols. 7-8 and FIGs. 7-8 of Suzuki as teaching the claim requirements of transmitting an acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data to cause the printer driver to send further data. (Final Office Action, pgs. 2-3) Applicants traverse and submit that the cited Suzuki does not teach or suggest transmitting the acknowledgment reply before completing the initial check when the printer driver does not send further data until receiving an acknowledgment that the transmitted data passed a check. In other words the cited art does not teach or suggest transmitting an acknowledgment indicating an initial check passed to the printer driver before completing the initial check.

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The cited col. 6 mentions that the printer can return a reply to the printer monitor immediately after the printer has received the command. The printer can buffer a command from the print monitor. The printer interprets the command, checks the status of an error and then generates and returns a reply to the command. (Suzuki, col. 6, line 32 to col. 7, line 7) Although the cited cols. 6-7 discuss returning a reply after the printer has completed receipt of a command or after checking the status, nowhere do the cited cols. 6-7 teach or suggest transmitting an acknowledgment to the printer driver indicating an initial check passed before completing the initial check to cause the printer driver to send further data.

The cited cols. 7-8 further mention that the printer uses a RAM as a receiving buffer. The printer monitor controls transmission of a bit image in accordance with a printer status to effect correct printing operation. The cited cols. 7-8 and FIGs. 7-8 discuss further commands, such as a job initiation declaration, job termination declaration, page start declaration, page end declaration, band transmission declaration, configuration data request to cause the printer to send information on the printer configuration and the current status, setting data request and status request, which may include status of an error.

Although the cited cols. 7-8 and FIGs. 7-8 discuss different types of requests and declarations and replies by the printer to these requests including status, nowhere do the cited cols. 7-8 of Suzuki teach or suggest transmitting an acknowledgment to the printer driver indicating an initial check passed before completing the initial check to cause the printer driver to send further data. Nowhere in the cited cols. 7-8 or other cited art is there any mention of these claim requirements.

Moreover, Applicants submit that the cited Suzuki teaches away from the requirement of transmitting the acknowledgment reply indicating that a check passed before completing the initial check to cause the printer driver to send more data. Suzuki mentions that the "capabilities primarily performed by a CPU 231 provided in the printer 3 correspond to the interpretation of a command, checking of the status of an error in the printer, and generation and return of a reply corresponding to the command" (Suzuki, col. 6, line 63 to col. 7, line 1) Thus, the cited Suzuki

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mentions that the status is checked in reply to a status request and the status is returned in response to the reply. (See also, col. 8, lines 47-67) Thus, the cited Suzuki does return the actual status, which teaches away from transmitting an acknowledgment reply before completing the initial check to cause the printer driver to send further data. Suzuki teaches away from sending the acknowledgment before completing the initial check because the acknowledgment in the cited Suzuki includes the status. Nowhere does the cited Suzuki teach or suggest returning status of an error before performing the initial check when the printer driver is waiting to receive an acknowledgment reply indicating that the data passed a check.

Accordingly, even if one were to modify Suzuki with Herzog as the Examiner proposes, the cited combination still does not teach or suggest the combination of requirements of claims 1, 11, and 21 because the cited art does not teach, alone or in combination, all the requirements for which it is cited.

In the Response to Arguments, the Examiner cited col. 6, lines 43-45 and col. 3, lines 50-57 of Suzuki as teaching the claim requirement sending the acknowledgment to the printer driver before completing the initial check. (Final Office Action, pg. 8) Applicants traverse.

The cited col. 6 mentions that a reply can be returned from the printer after the printer has completed receipt of a corresponding command. This does not teach or suggest the claim requirement of sending a reply before completing the initial check. In fact, the following lines mention that the reply comprises data pertaining to the status or an error of the printer at a point at which the printer becomes able to return reply. (Suzuki, col. 6, lines 45-47). This implies that there is initial checking by the printer before sending the reply because the reply has data on status or printer error, which could not be provided if the reply was made before completing the initial checking. Nowhere does this cited col. 6 teach or suggest transmitting the reply before completing the initial check of the sent data as claimed.

The additionally cited col. 3 mentions that when printing of a page has finished, the printer sends a print completion report to the host device. Nowhere does this cited col. 3 anywhere teach that the reply is transmitted before completing the initial check. In fact, this

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teaches the opposite, because in the cited col. 3, the page print completion is sent after the printer has printed the data, which is well after the initial check processing, not before the initial check processing as claimed.

Accordingly, Claims 1, 11, and 21 are patentable over the cited combination because the cited references do not teach or suggest the claim requirements.

During the phone interview, the Examiner requested the attorney to explain how claims 1, 11, and 21 distinguish over paragraphs on pgs. 94 and 95 of the document "Data Stream and Object Architectures: Intelligent Printer Data Stream Reference", IBM Document No. S54403417-05 ("IPDS reference"). This reference was not applied in a rejection.

On pg. 94 of the IPDS reference, the Examiner referenced the sub-paragraph on Multiple copy subgroups, which mentions that when multiple copy subgroups are specified all copies of pages on a sheet might not be completely syntax checked until the last page on the sheet is checked. An acknowledgment only guarantees that a copy from the first copy subgroup has been syntax checked.

This cited pg. 94 does not disclose the claim requirement of transmitting an acknowledgment reply in response to the acknowledgment request to the printer before completing the initial check. Instead, the cited pg. 94 teaches that there is initial processing of a syntax check on a first copy subgroup. Thus, for the cited pg. 94, the acknowledgment is sent after completing an initial syntax checking, not before completing initial checking as claimed.

The Examiner further referenced the second paragraph on pg. 95. This referenced paragraph mentions that if the printer receives a command requesting acknowledgment, the printer expects the presentation services program to wait for the acknowledgment before sending further commands, and that if additional commands are received before the ACK from the printer, all such commands are discarded.

This referenced pg. 95 does not disclose or mention the claim requirement that the printer transmit the acknowledgment reply before completing the initial check. The cited pg. 95 does

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not concern when the printer responds to an acknowledgment request as claimed, but instead discusses the printer expectations for the presentation services program.

At the request of the Examiner, Applicants explained the distinctions over the referenced sections of the IPDS reference notwithstanding that the Examiner has not issued a formal rejection in order to expedite prosecution. If the Examiner disagrees with Applicant's distinctions over the referenced sections of the IPDS reference, then Applicants request that the Examiner withdraw the finality of the rejection to submit a non-final rejection with this new reference as required by Section 706.07(a) of the Manual of Patent Examination and Procedure (MPEP).

Claims 2-4, 6, 10, 12-14, 16, 20, 22-24, 26, and 30 are patentable over the cited art because they depend from claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above. Moreover, the following below discussed dependent claims provide additional grounds of patentability over the cited art.

Claims 2, 12, and 22 depend from claims 1, 11, and 21 and further require that the received data comprises a first received data set, further comprising receiving a second data set from the printer driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set.

In the Response to Arguments, the Examiner cited col. 6, lines 43-45 and col. 10, line 46 to col. 11, line 13 of Suzuki as teaching the additional requirements of these claims. (Final Office Action, pg. 9) Applicants traverse.

The cited col. 6 mentions that a reply can be returned from the printer after the printer has completed receipt of a corresponding command. The cited cols. 10-11 mentions that the printer may send to the printer monitor a reply indicating that the receiving buffer is full. The printer monitor may send a status request to the printer at regular time intervals if the buffer is full to determine when the buffer is released from the full state. If the buffer is not full, the print monitor sends the next transmission declaration and checks whether the buffer is full. This is repeated until all the band data of a page is sent.

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Nowhere do the cited cols. 6 and 10-11 anywhere teach or suggest receiving a second data set from the print driver after transmitting the acknowledgment reply and before completing the rasterization of the first data set. The cited columns mention how further data is sent by the print monitor to the printer, but nowhere suggests that a second set of data is received after the printer transmits an acknowledgment reply and before completing rasterization of the first set. There is no mention in the cited Suzuki of receiving the second data set before completing the rasterization as claimed.

Accordingly, claims 2, 12, and 22 provide additional grounds of patentability over the cited art.

Claims 10, 20, and 31 depend from claims 1, 11, and 21 and further require transmitting the acknowledgment reply to the printer driver in response to the acknowledgment request before completing the initial check of the sent data comprises an asynchronous processing mode, and wherein resynchronizing data processing operations in response to detecting the error comprises beginning a synchronous processing mode wherein the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data.

The Examiner cited col. 15, lines 40-45 of Herzog as teaching that the acknowledgment reply sent before completing the check is in an asynchronous mode. (Final Office Action, pg. 4) Applicants traverse.

The cited col. 15 teaches away from the claim requirement of an asynchronous acknowledgment reply, because the cited col. 15 mentions that ACKs are submitted synchronously in response to an acknowledgment request. Col. 15 mentions that negative acknowledgments may be sent asynchronously or synchronously. However, the claims require an acknowledgment reply indicating that an initial check completed, which is not a negative acknowledgment. In the cited col. 15, ACKs are sent synchronously, not asynchronously as claimed. Thus, the cited col. 15 teaches the opposite of what is claimed, synchronous instead of the claimed asynchronous acknowledgment reply.

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The Examiner cited col. 15 and col. 10, lines 1-4, lines 1-45 of Suzuki as teaching the claim requirement of resynchronizing data processing operations in response to detecting that the error comprises beginning a synchronous processing mode wherein the acknowledgment reply is sent to the printer driver in response to the acknowledgment request after completing the initial check of the resent data. (Final Office Action, pg. 5) Applicants traverse.

The Examiner cited col. 10, lines 1-45 of Suzuki as teaching that the resynchronizing operations begin a synchronous processing mode. The cited col. 10 mentions that the print monitor sends a job initiation declaration and receives a reply. Although the cited Suzuki discusses sequential commands, nowhere does the cited Suzuki teach or suggest that resynchronizing comprises beginning a synchronous processing mode when an asynchronous mode was used before detection of the error. In other words, nowhere does the cited Suzuki anywhere teach or suggest switching from asynchronous mode to synchronous mode printer processing in response to detecting an error.

The cited col. 10 further discusses how a print monitor communicates with a printer to determine whether to send pages. Nowhere does the cited col. 10 anywhere teach or suggest the claim requirement of switching from asynchronous mode to synchronous mode printer processing in response to detecting an error, so that in the synchronous mode the acknowledgment reply is sent in response to the acknowledgment request after completing the initial check of the resent data.

In the Response to Arguments, the Examiner further cited col. 11, lines 14-15 of Suzuki and col. 35, lines 4-10 and col. 32, lines 30-36 of Herzog. (Final Office Action, pg. 9) Applicants traverse.

The cited col. 11 of Suzuki mentions that the printer asynchronously performs receipt of commands. The cited cols. 32 and 35 of Herzog mentions that host data retransmission is initiated only after a synchronizing command and exception conditions are reported asynchronously. Nowhere do these additionally cited sections of Suzuki and Herzog teach or

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suggest the claim requirements that an acknowledgment reply is sent asynchronously before completing the initial check and that resynchronizing data is performed in a synchronous mode.

Accordingly, claims 10, 20, and 31 provide additional grounds of patentability over the cited art.

2. Claims 4, 14, and 24 are Patentable over the Cited Art

The Examiner rejected claims 4, 14, and 24 as obvious (35 U.S.C. §103) over Suzuki and Herzog and further in view of Suzuki (EP820004). Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above.

3. Claims 5, 15, and 25 are Patentable over the Cited Art

The Examiner rejected claims 5, 15, and 25 as obvious (35 U.S.C. §103) over Suzuki and Herzog and further in view of Parker (U.S. Patent No. 6,441,919). Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-30 are patentable over the art of record. Applicants have not added any claims. Nonetheless, should any additional fees be required, please charge Deposit Account No. 50-0563.

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The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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By: 

David W. Victor
Registration No. 39,867

Please direct all correspondences to:

David Victor
Konrad Raynes & Victor, LLP
315 South Beverly Drive, Ste. 210
Beverly Hills, CA 90212
Tel: 310-553-7977
Fax: 310-556-7984